

IN THE CLAIMS:

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1. (Twice Amended) A method for generating a continuous stream of liquid solder metal droplets for selective application to locations on a substrate comprising:
producing a continuous stream of liquid solder metal droplets from a reservoir of liquid solder metal; and
selectively directing said stream of liquid solder metal droplets in a first dimension and a second dimension, said selectively directing to said locations on said substrate comprising:
raster scanning said stream of liquid solder metal droplets, said raster scanning including electrically charging said stream of liquid solder metal droplets; and
deflecting said electrically charged stream of liquid solder metal droplets in said first dimension and said second dimension to said locations on said substrate; and
blanking selectively said stream of liquid solder metal droplets to prevent a portion of said stream of liquid solder metal droplets from contacting said substrate.
 2. (Three Times Amended) The method according to claim 1, wherein said producing step further comprises:
heating a solder metal to a liquid state in the reservoir; and
controlling a temperature of the liquid solder metal in the reservoir for providing [of] said stream of liquid solder metal droplets in said liquid state while selectively directing said stream of liquid solder metal droplets.
 3. (Previously Amended) The method according to claim 1, wherein said producing step further comprises:
inducing a pressure on a source of liquid metal; and
vibrating said liquid metal to cause said stream of liquid solder metal droplets to be formed as said pressure is induced on said source of liquid metal.

4. (Previously Amended) The method according to claim 3, wherein said pressure inducing step is generated by a first piezoelectric crystal driven by a given frequency to produce a desired pressure.

5. (Previously Twice Amended) The method according to claim 4, wherein said vibrating step is generated by a second piezoelectric crystal driven by a selected frequency to produce a given vibration frequency sufficient enough to form droplets having a diameter in the range of 40 microns to 300 microns.

6. (Previously Twice Amended) The method according to claim 1, wherein said producing step further comprises forming said stream of liquid solder metal droplets having a consistent diameter in the range of 40 microns to 300 microns.

7. (Previously Twice Amended) The method according to claim 1, wherein said blanking step comprises blanking when said stream of liquid solder metal droplets is positioned between an endpoint of a first horizontal scan line and a start point of a second horizontal scan line.

8. (Previously Amended) The method according to claim 1, wherein said blanking step further comprises:
deflecting said stream of liquid solder metal droplets; and
catching said deflected stream of liquid solder metal droplets to prevent said drops from being deposited on said substrate.

9. (Original) The method according to claim 1, wherein said directing step comprises programmably controlling a direction of said stream of liquid solder metal droplets.